

Amendments to the Claims

This listing of claims replaces all prior versions and listings of the claims in the application.

Listing of Claims:

1. (Currently amended) A method comprising a step of determining a head positioning profile for a first track in relation to a track profile for the first track and a track profile for a second track, the steps of:
 - ~~creating a track profile for at least one track of a plurality of tracks using error signals for the at least one track;~~
 - ~~creating an adjacent track profile for a track adjacent to the at least one track using error signals for the adjacent track; and~~
 - ~~determining a head positioning profile for the at least one track using the track profile and the adjacent track profile.~~
2. (Original) The method of Claim 1, wherein each track profile is a PES RRO track profile.
3. (Currently amended) The method of Claim 1, wherein the head positioning profile of the determining step is further generated in relation to a track profile for a third track further comprising ~~the step of creating a second adjacent track profile for a second track adjacent to the at least one track using error signals for the second adjacent track,~~ wherein the determining step also uses the second adjacent track profile.

4. (Currently amended) The method of Claim 3, wherein a track profile is represented by WI, the ~~at least one~~ first track is represented by n, the second track adjacent to the ~~at least one track~~ is represented by n-1, and the third ~~second~~ track adjacent to the ~~at least one track~~ is represented by n+1, the head positioning profile is represented by ZAP(n), and wherein $ZAP(n) = -WI(n) - \alpha * [WI(n-1) + WI(n+1)]$, where alpha is a number between 0 and 1.

5. (Original) The method of Claim 4, wherein alpha is substantially equal to 0.5.

6. (Currently amended) A method of compensating for positioning errors in a data storage device, comprising a step of determining a head positioning profile for a first track in relation to zero acceleration path (ZAP) information for the first track in combination with ZAP information for a second track. ~~the step of:~~
~~using track profile information for a track being ZAPed in addition to track profile information for a track adjacent to the track being ZAPed when ZAPing the track.~~

7. (Original) The method of claim 6, further comprising a step of selectively ZAPing particular tracks on the data storage device based upon whether a given tracks' maximum profile exceeds a predetermined threshold value.

8. (Currently amended) The method of Claim 6, wherein the head positioning profile of the determining step is further determined in relation to ZAP information for a

third track ~~track profile information for another track adjacent to the track being ZAPed is also used when ZAPing the track.~~

9. (Currently amended) The method of Claim 6, wherein the head positioning profile is determined in relation to track is ZAPed according to $ZAP(n) = -WI(n) - \alpha * [WI(n-1) + WI(n+1)]$, wherein $WI(n)$ is the ~~track profile~~ ZAP information for the first track n, $WI(n-1)$ is the ~~track profile~~ ZAP information for the second track adjacent to the track being ZAPed, $WI(n+1)$ is the ~~track profile~~ ZAP information for ~~the another~~ a third track adjacent to the track being ZAPed, and wherein α is a numeric value between 0 and 1.

10. (Original) The method of Claim 9 wherein α is substantially equal to 0.5.

11. (Original) A system for compensating for positioning errors in a data storage device having a plurality of tracks by zero acceleration processing (ZAP), comprising:
means for selectively determining which of the plurality of tracks to ZAP; and
means for ZAPing at least one of the selectively determined tracks using a track profile of the track being ZAPed in addition to a track profile of a track adjacent to the track being ZAPed to generate a head positioning profile for the at least one track.

12. (Original) The system of Claim 11, wherein each track profile is a PES RRO track profile.

13. (New) The method of claim 1, further comprising a prior step of comparing the track profile for the first track to a predetermined threshold, and performing the determining step for the first track in relation to said comparison.

14. (New) The method of claim 1, wherein the first and second tracks are disposed on a rotatable data storage medium.

15. (New) The method of claim 6, further comprising a prior step of comparing the track profile for the first track to a predetermined threshold, and performing the determining step for the first track in relation to said comparison.

16. (New) The method of claim 6, wherein the first and second tracks are disposed on a rotatable data storage medium.

17. (New) The system of claim 11, wherein the plurality of tracks are disposed on a rotatable data storage medium of said device.